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EXAMINER

SNIDER, THERESA T

ART UNIT

PAPER NUMBER

1744

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 10/050,501	Applicant(s) ILLINGWORTH, LEWIS
Examiner Theresa T. Snider	Art Unit 1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory maximum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/5/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-23, 25-28 and 30-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-23, 25-28 and 30-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other _____

DETAILED ACTION

Drawings

1. Figures 11-12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. From Applicant's arguments of 4/5/2004, one is lead to believe that the structures of figures 11-12 are prior art, as opposed to the claimed invention. Is this the case?

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-2, 4-23, 25-28 and 30-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claims 1, 22 and 42, it is unclear as to what is meant by 'toroidal vortex' nozzle. What structural features must be present? Please see remarks below.

Claim 1, lines 6-9, it is unclear as to the structural relationship of the elements with respect to each other; are any of the elements located within the housing? Are they attached thereto?

Claim 2, line 2, vented to where?

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Claim 11, line 2, it is unclear as to what is meant by 'a side by side configuration'.

Claim 12, line 2, it is unclear as to what is meant by 'a Siamese twin configuration'.

Claim 21, line 2, should 'course' be replaced with 'coarse'?

Claim 22, lines 3-6, it is unclear as to the structural relationship of the elements with respect to each other; are any of the elements located within the housing? Are they attached thereto?

Line 5, 'disposed' where?

Claims 23 and 25-41, line 1, 'system' should be deleted (or it should be inserted in claim 22).

Claim 23, line 2, vented to where?

Claims 31-35, line 2, it is unclear as to where in the 'hose' is located with respect to the other previously recited elements.

Claim 31, line 2, it is unclear as to what is meant by 'a side by side configuration'.

Claim 32, line 2, it is unclear as to what is meant by 'a Siamese twin configuration'.

Claim 42, line 1 recites a 'vacuum cleaner system' however fails to disclose any means to provide a 'vacuum'.

Claim 42, lines 2-3, it is unclear as to the structural relationship of the elements with respect to each other.

Claim 43, line 2 it is unclear as to the structural relationship of the 'collector' with respect to the other previously recited elements.

Claim 50, line 2, 'removable' from what?

Line 2, is 'a container' in addition to that of claim 42, line 5 or one in the same?

Claim 51, line 3, is 'a container' in addition to that of claim 42, line 5 or one in the same?

Claim 52, line 2, 'a plug' for what purpose?

Line 2, is 'a container' in addition to that of claim 42, line 5 or one in the same?

Claim 53, line 2, 'said fluid delivery means' lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

For examination purposes, a 'toroidal vortex nozzle' was believed to be defined on page 15, lines 19-20 and page 16, lines 6-9, a concentric nozzle wherein clean air flows down the outside passages and dirty air is suctioned up the middle passage.

2. Claims 1, 8-11, 14-16, 20, 22, 27-28, 37 and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ehnert.

Ehnert discloses a canister-style vacuum cleaner housing (fig. 3, #66).

Ehnert discloses a fluid delivery means (col. 4, lines 4-5).

Ehnert discloses a separation means (col. 4, line 5).

Ehnert discloses a toroidal vortex nozzle (fig. 4).

With respect to claims 8-10, Ehnert discloses a hose (fig. 3, #76).

With respect to claim 11, Ehnert discloses the hose having a side-by-side configuration (fig. 3, #76,78).

With respect to claim 14, Ehnert discloses a flexible hose (col. 4, lines 13-16).

With respect to claim 15, Ehnert discloses a removable hose (col. 4, lines 16-19).

With respect to claim 16, Ehnert discloses a handle (fig. 3, #70).

With respect to claim 20, Ehnert discloses at least one of the fluid delivery means and separation means disposed within the housing (col. 4, lines 4-6).

With respect to claim 22, Ehnert discloses an upright-style vacuum cleaner housing (fig. 1, #10).

With respect to claim 27, Ehnert discloses the nozzle having a wheel (fig. 1, #32).

With respect to claim 28, Ehnert discloses the nozzle being hinged (fig. 1, #46).

With respect to claim 37, Ehnert discloses a handle (fig. 1, #44).

With respect to claim 40, Ehnert discloses at least one of the fluid delivery means and separation means disposed within the housing (fig. 1, #60).

3. Claims 1, 8-11, 14-21, 42, 46, 48 and 53 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McCord.

McCord discloses a canister-style vacuum cleaner housing (fig. 1, #20).

McCord discloses a fluid delivery means (fig. 3, #34).

McCord discloses a separation means (col. 2, lines 35-37).

McCord discloses a toroidal vortex nozzle (fig. 11).

With respect to claims 8-10, McCord discloses a hose (fig. 1, #24).

With respect to claim 11, McCord discloses a hose of a side-by-side configuration (fig. 11, #83,86).

With respect to claims 14-15, McCord discloses a removable, flexible hose (col. 3, #14-16).

With respect to claim 16, McCord discloses a handle (fig. 1, #26).

With respect to claims 17-18, McCord discloses a removable container coupled to the separation means (fig. 3, #50,52).

With respect to claim 19, McCord discloses the separation means being a centrifugal separator (col. 4, lines 37-39, col. 5, lines 54-56).

With respect to claim 20, McCord discloses at least one of the fluid delivery means and separation means disposed within the housing (fig. 3, #34).

With respect to claims 21 and 53, McCord discloses a coarse mesh trap (col. 4, lines 38-47).

With respect to claim 42, McCord discloses a toroidal vortex nozzle (fig. 11). McCord discloses a centrifugal separator (col. 4, lines 37-39, col. 5, lines 54-56). McCord discloses a container coupled to the separator (fig. 3, #50).

With respect to claims 46 and 48, McCord discloses the fluid flow generated by an impeller/propeller (fig. 3, #34).

4. Claims 22 and 38-39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by DE661573.

DE661573 discloses an upright-style vacuum cleaner housing (fig. 1, d).

DE661573 discloses a fluid delivery means (fig. 1, b).

DE661573 discloses a separation means (fig. 1, c).

DE661573 discloses a toroidal vortex nozzle (fig. 1, k).

With respect to claims 38-39, DE661573 discloses a removable container coupled to the separation means (figs. 1-2, e).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 2 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claims 1 and 22, respectively, above, and further in view of Self.

Ehnert discloses a similar vacuum cleaner however fails to disclose a vented nozzle.

Self discloses a tubular nozzle that discharges air with a vent (fig. 3, #51). It would have been obvious to one of ordinary skill in the art to provide the vent of Self in Ehnert to

provide for a means to prevent pressure buildup within the nozzle if it happens to get blocked by debris.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCord as applied to claim 1 above, and further in view of Self.

McCord discloses a similar vacuum cleaner however fails to disclose a vented nozzle. Self discloses a tubular nozzle that discharges air with a vent (fig. 3, #51). It would have been obvious to one of ordinary skill in the art to provide the vent of Self in McCord to provide for a means to prevent pressure buildup within the nozzle if it happens to get blocked by debris.

9. Claims 4-5 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claims 1 and 22, respectively, above, and further in view of Takemoto.

Ehnert discloses a similar vacuum cleaner however fails to disclose a rotating brush. Takemoto discloses a vacuum cleaner with a nozzle having recirculating flow with a rotating brush therein (fig. 18, #16). It would have been obvious to one of ordinary skill in the art to provide the brush of Takemoto in Ehnert to allow for the most effective cleaning of a surface by allowing for agitation of the surface.

10. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCord as applied to claim 1 above, and further in view of Takemoto.

McCord discloses a similar vacuum cleaner however fails to disclose a rotating brush.

Takemoto discloses a vacuum cleaner with a nozzle having recirculating flow with a rotating brush therein (fig. 18, #16). It would have been obvious to one of ordinary skill in the art to provide the brush of Takemoto in McCord to allow for the most effective cleaning of a surface by allowing for agitation of the surface.

11. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert. Ehnert discloses a similar vacuum cleaner however fails to disclose a wheel on the nozzle or a Siamese hose configuration.

Ehnert discloses the presence of a wheel on the nozzle when an upright-style canister is used because more mass needs to be displaced than that in a canister-style housing (col. 4, lines 22-26). It would have been obvious to one of ordinary skill in the art to include the wheel on the nozzle of the canister-style nozzle of Ehnert to ensure that the nozzle does not become 'stuck' to a surface.

With respect to claim 12, it would have been obvious to one of ordinary skill in the art to determine the most appropriate hose configuration in Ehnert to allow for the most effective fluid flow.

12. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claim 1 above, and further in view of CA972510.

Ehnert discloses a similar vacuum cleaner however fails to disclose a hinged nozzle or concentric hose configuration.

CA972510 discloses a vacuum cleaner with a recirculating nozzle wherein the nozzle is hinged (page 6, lines 7-13). It would have been obvious to one of ordinary skill in the art to provide the hinged nozzle of CA972510 in Ehnert to allow for a change in working position

With respect to claim 13, CA972510 discloses a concentric hose configuration (fig. 1, #4,6). It would have been obvious to one of ordinary skill in the art to provide the hose configuration of CA972510 in Ehnert to allow for a more compact hose design.

13. Claims 7, 13 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCord as applied to claim 1 above, and further in view of CA972510.

McCord discloses a similar vacuum cleaner however fails to disclose a hinged nozzle or concentric hose configuration

CA972510 discloses a vacuum cleaner with a recirculating nozzle wherein the nozzle is hinged (page 6, lines 7-13). It would have been obvious to one of ordinary skill in the art to provide the hinged nozzle of CA972510 in McCord to allow for a change in working position

With respect to claim 13, CA972510 discloses a concentric hose configuration (fig. 1, #4,6). It would have been obvious to one of ordinary skill in the art to provide the hose configuration of CA972510 in McCord to allow for a more compact hose design.

14. Claims 12, 43-44, 47 and 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCord.

McCord discloses a similar vacuum cleaner however fails to disclose a Siamese hose configuration or collector.

With respect to claim 12, it would have been obvious to one of ordinary skill in the art to determine the most appropriate hose configuration in McCord to allow for the most effective fluid flow.

With respect to claims 43-44 and 49-50, due to the 112, second paragraph problem, it is not cleaner as to what is being claimed. From the figures it is believed that the container of claim 42 is the same as the collector of the later claims. If this is incorrect, the rejection will be corrected. McCord discloses a removable collector (fig. 3, #50,52).

With respect to claim 47, it would have been obvious to one of ordinary skill in the art to determine the most appropriate fluid flow generation device in McCord to ensure for recirculating flow.

With respect to claims 51-52, it would have been obvious to one of ordinary skill in the art to determine the most appropriate collector structure in McCord to allow for the most effective dirt disposal.

15. Claims 30-31 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claim 22 above, and further in view of Inoue et al..

Ehnert discloses a similar vacuum cleaner however fails to disclose a hose.

Ehnert discloses conduits for connection between the nozzle and the housing (fig. 1, #56,58). Inoue et al. discloses a vacuum cleaner with an upright-style housing having a hose for connection between the nozzle and the housing (fig. 2, #28,30). It would have

been obvious to one of ordinary skill in the art to provide the hose of Inoue et al. in Ehnert to allow for a flexible connection.

16. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ehnert as applied to claim 22 above, and further in view of McCord.

Ehnert discloses a similar vacuum cleaner however fails to disclose a course mesh trap.

McCord discloses a recirculating vacuum cleaner with a course mesh trap (col. 4, lines 38-47). It would have been obvious to one of ordinary skill in the art to provide the mesh trap of McCord in Ehnert to ensure that all of the debris is captured and not returned to either the surface or the fluid delivery means.

Allowable Subject Matter

17. Claims 32-33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

18. The following is a statement of reasons for the indication of allowable subject matter: the prior art discloses an upright toroidal vortex vacuum cleaner with an upright-style housing, a fluid delivery means, separation means, toroidal vortex nozzle and a hose HOWEVER fails to disclose or fairly suggest the hose being of a Siamese twin or concentric configuration.

Double Patenting

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

20. Claim 42 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7 of U.S. Patent No. 6,687,951. Although the conflicting claims are not identical, they are not patentably distinct from each other because 6,687,951 discloses a centrifugal separation chamber, the chamber would constitute a 'container'.

21. Claim 47 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 of U.S. Patent No. 6,687,951. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons set forth above.

Response to Arguments

22. Applicant's arguments filed 4/5/2004 have been fully considered but they are not persuasive. With respect to the 112, 2nd paragraph rejections, Applicant states that claims 1 and 22 are definite because of the presence of the 'vacuum cleaner housing'. Applicant is believed to be in error with his arguments because the claims merely recite a 'list' of elements without providing any structural relationship of them to each other. One cannot assume that because

there is a housing that all the elements are within the housing. For instance, is the nozzle in the housing? With respect to claim 42, 'fluid flow' is a function of use and therefore not a structural limitation. Is there something that creates the fluid flow?

Applicant urges that the claimed invention is a centrifugal separator whereas Ehnert discloses a filter. It argument is not deemed persuasive because the claim recites a 'separation means' and the filter of Ehnert is a separation means. If Applicant intends for it to be a centrifugal separator, it should be inserted into the claim.

Applicant urges that the prior art do not have 'toroidal vortex' nozzles. This is not deemed persuasive because the specification on page 15, lines 19-20 and page 16, lines 6-9 define a toroidal vortex nozzle as a concentric nozzle wherein clean air flows down the outside passages and dirty air is suctioned up the middle passage. Page 29 discloses the 'optimization' of a concentric system. Is this to mean that if you optimize, as disclosed, you arrive at a toroidal vortex nozzle or the concentric system is also a toroidal vortex nozzle but a poorly performing one? What are the structural elements that need to present all the time that would clearly distinguish a toroidal vortex nozzle from a 'regular' recirculating type nozzle. Applicant urges that a toroidal vortex nozzle needs to be sealed. It is unclear as to where in the specification and figures this is disclosed. Page 29 discloses one has minimal leakages however a 'sealed' environment would constitute no leakage. It is noted that McCord discloses curved surfaces (fig. 11).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (571) 272-1277. The examiner can normally be reached on Monday-Wednesday-Friday (6:30AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Theresa T. Snider
Primary Examiner
Art Unit 1744

5/28/2004